



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY-REGION II
290 BROADWAY
NEW YORK, NEW YORK 10007-1866

**AUTHORIZATION TO DISCHARGE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES)**

**PERMIT NUMBER
PR0023736**

In compliance with the provisions of the Clean Water Act, as amended, 33 U.S.C. §1251 et. seq.
(The "Act"),

Puerto Rico Aqueduct and Sewer Authority (PRASA)
P.O. Box 7066
Barrio Obrero Station
Santurce, Puerto Rico 00916

hereinafter referred to as "the Permittee" is authorized to discharge from a facility located at

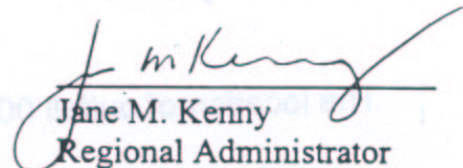
Aguadilla Regional Wastewater Treatment Plant
Aguada, Puerto Rico

to receiving waters named **Atlantic Ocean** in accordance with effluent limitation, monitoring requirements and other conditions set forth herein (31 pages) and in Attachments #1 (13 pages), #2 (6 pages), #3 (23 pages) and #4 (1 page), which are a part hereof.

This permit shall become effective on _____, which is the effective date of the permit (EDP).

This permit and the authorization to discharge shall expire on _____.

Signed this 19 . . day of Feb , 2003


Jane M. Kenny
Regional Administrator

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Required Effluent Limitations and Monitoring Requirements

During the period beginning on the effective date and lasting until the expiration date of this permit, discharges from outfall 001* shall be limited and monitored by the permittee as specified below:

- a. Permittee shall comply with the U.S. Environmental Protection Agency's (EPA's) technology based requirements established in Table I (page #3) of the permit.
- b. Permittee shall achieve water quality requirements as determined by the Commonwealth of Puerto Rico and for cyanide and sulfide as determined by EPA. See the Environmental Quality Board's (EQB's) water quality certificate (WQC) requirements and EPA's cyanide and sulfide 301 (h)-based water quality requirements included from page 5 through 26 of the permit.
- c. Permittee shall comply with EPA's Prohibited Discharge Standards Requirements established in page 27 of the permit.
- d. Permittee shall comply with EPA's Pretreatment Program Requirements included from page 27 through page 31 of the permit.
- e. Permittee shall comply with EPA's Sewage Sludge Requirements established in pages 31 and 32 of the permit.
- f. Permittee shall comply with EPA's Monitoring and Reporting Requirements and General Conditions established in Attachment #1.
- g. Permittee shall implement a Preventive Maintenance Program for the facility and its related appurtenances as established by EPA in Attachment #2.
- h. Permittee shall conduct the EPA's Waiver Monitoring Program included in Attachment #3, however the Mixing Zone Validation Study shall be done in accordance with the EQB requirements established in tables A-1, A-2, A-3 and the special conditions of the permit.
- i. Permittee shall conduct a Non-industrial source control program as established in Attachment #4 by EPA.

* The location of outfall 001 is as follows:

Latitude 18° 24' 14" North
Longitude 67° 11' 06" West

TABLE I
TECHNOLOGY-BASED EFFLUENT LIMITATIONS

EFFLUENT CHARACTERISTICS	DISCHARGE LOAD ALLOCATIONS		DISCHARGE CONCENTRATION LIMITATIONS		MINIMUM PERCENT REMOVAL LIMITATIONS
	Average Monthly	Average Maximum Daily	Average Monthly	Average Weekly	Average Monthly
	(kg/day)	(kg/day)	(mg/l)	(mg/l)	
5-Day-20°C Biochemical Oxygen Demand ^{1,2}	3,213.07	6, 426.14	106		30%
Suspended Solids ^{1,2}	2,121.84	4,243.68	70		50%
<p>Permittee shall comply with the technology based effluent limits for BOD and TSS</p> <p>Flow shall be reported as a monthly average and a daily maximum. Measurement frequency shall be continuous.</p>					

1 - Measurement frequency shall be twice a week using composite samples

2 - The permittee shall continue the use of flow proportional chemical addition to enhance solids sedimentation.

2. Environmental Quality Board Certification Requirements

As required by EPA and the EQB Final Water Quality Certification of February 9, 2000, for the purpose of assuring compliance with EPA's marine criteria as specified in Section 304 (a)(1) and EQB's water quality standards and other appropriate requirements of Commonwealth law as provided by Section 401(d) of the Act, the permittee shall comply with the following effluent limitations and other limitations:

See pages 5 through 27

TABLE A-I
EFFLUENT LIMITATIONS
AND MONITORING REQUIREMENTS

During the period beginning on EDP and lasting through the expiration date of the permit, the permittee is authorized to discharge from outfall serial number 001 (treated wastewater). Such discharge shall be limited and monitored by the permittee as specified below:

Receiving Water Classification : SC

Effluent Characteristic	Gross Discharge Effluent Limitations		Monitoring Requirements	
	Monthly Avg	Daily Max	Measurement Frequency	Sample Type
Flow m ³ /day (MGD) ^{3,4}	30,283.2 (8.0)	60,566.4 (16.0)	Continuous	Recording
BOD ₅ ^a (mg/l) ^{1,2 *}	See Table I, (page 3)		Twice per Week	Composite
Total Suspended Solids (mg/l) ²	See Table I, (page 3)		Twice per Week	Composite
Dissolved Oxygen (mg/l) ^{1,2,3}	---		Daily	Grab
Total Coliform (colonies/100ml) ^{1,2}	The coliform geometric mean of a series of representative samples (at least five samples) of the waters taken sequentially in a given instance shall not exceed 10,000 colonies/100 ml.		Monthly	Grab
Fecal Coliform (colonies/100ml) ^{1,2}	The coliform geometric mean of a series of representative samples (at least five samples) of the waters taken sequentially in a given instance shall not exceed 2,000 colonies/100 ml. Not more than 20% of the samples shall exceed 4,000 colonies/100ml.		Monthly	Grab
Residual Chlorine (mg/l) ^{1,3}	0.50		Daily	Grab
pH (SU) ^{1,2}	Shall always lie between 6.0-9.0		Daily	Grab
Color (Pt/Co SU) ^{1,2}	48		Monthly	Grab
Turbidity (NTU) ^{1,2}	84		Monthly	Grab
Oil and Grease (mg/l) ^{1,2,3}	10	15	Twice per month	Grab
Nitrogen (NO ₃ , NO ₂ , NH ₃) (mg/l) ^{1,2}	65.000		Monthly	Grab

TABLE A-1
EFFLUENT LIMITATIONS
AND MONITORING REQUIREMENTS

<u>Effluent Characteristic</u>	<u>Gross Discharge</u>		<u>Monitoring Requirements</u>	
	<u>Effluent Limitations</u>		Measurement	Sample
	Monthly Avg	Daily Max	Frequency	Type
Cadmium (Cd) (g/l) ^{1,2}		8.00	Monthly	Grab
Lead (Pb) (g/l) ^{1,2}		91.5	Monthly	Grab
Manganese (Mn) (g/l) ^{1,2}		134.0	Monthly	Grab
Mercury (Hg) (g/l) ^{1,2,5}		0.6	Monthly	Grab
Nickel (Ni) (g/l) ^{1,2,5}		49	Monthly	Grab
Silver (Ag) (g/l) ^{1,2}		85.0	Monthly	Grab
Sulfide (Total) ^b (g/l)		4700	Monthly	Grab
Surfactant (as Methylene Blue Activate Substances) (g/l) ^{1,2}		6300	Monthly	Grab
TKN (g/l) ^{1,2}		---	Monthly	Grab
Zinc (Zn) (g/l) ^{1,2}		128.00	Monthly	Grab
Arsenic (As) (g/l) ^{1,2}		4	Monthly	Grab
Suspended, Colloidal or Settleable Solids (ml/l) ^{1,2}	Solids from wastewater sources shall not cause deposition in, or be deleterious to the designated uses of the waters.		Daily	Grab
Temperature °F (°C) ^{1,2}	No heat may be added to the waters of Puerto Rico which would cause the temperature of any site to exceed 90°F or 32.2 °C.		Daily	Grab

TABLE A-1

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

<u>Effluent Characteristic</u>	<u>Gross Discharge</u>		<u>Monitoring Requirements</u>	
	<u>Effluent Limitations</u>		<u>Measurement</u>	<u>Sample</u>
	Monthly Avg	Daily Max	Frequency	Type
Taste and Odor-producing Substances ^{1,2}	Shall not be present in amounts that will interfere with the use for potable water supply, or will render any undesirable taste and/or odor to edible aquatic life.		---	---
Solids and Other Matter ^{1,2}	The waters of Puerto Rico shall not contain floating debris, scum and other floating materials attributable to discharges in amounts sufficient to be unsightly or deleterious to the existing or designated uses of the water body.		---	---
Special Conditions	See attached sheet which contains special conditions that constitute part of this certification.		---	---

1, 2, 3, 4, 5, 6, 7 and 8 see page 26.

To comply with the monitoring requirements specified above, samples shall be taken at the outfall of discharge serial number 001.

All flow measurements shall achieve accuracy within the range of plus or minus 10%.

- a The effluent limitation for BOD₅ is based on the PRASA Mixing Zone Application for the Aguadilla Regional Wastewater Treatment Plant, after determining that there is a reasonable assurance that this limit will not cause violations to the water quality standard for Dissolved Oxygen for Class SC.
- b EPA has imposed an effluent limitation for Total Sulfide to ensure that the Aguadilla RWWTP will not cause or contribute to potential exceedances of the applicable water quality standards.

TABLE A-2
EFFLUENT LIMITATIONS AND MONITORING
REQUIREMENTS AT THE EDGE OF THE MIXING ZONE

During the period beginning on EDP + 4 months and lasting through EDP + 16 months the permittee shall perform monitoring at the mixing zone monitoring stations as specified below:

Receiving Water Classification : SC

<u>Effluent Characteristic</u>	<u>Gross Discharge Effluent Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Avg	Daily Max	Measurement Frequency	Sample Type
Arsenic (As) (g/l) ^{1,2}		1.4	Monthly	Grab
Cadmium (Cd) (g/l) ^{1,2}		5.00	Monthly	Grab
Color (Pt-Co) ^{a,1,2}	Shall not be altered by other than natural phenomena		Monthly	Grab
Dissolved Oxygen (mg/l) ^{1,2}	Shall contain no less than 4.0 mg/l		Monthly	Grab
Lead (Pb)(g/l) ^{1,2}		8.5	Monthly	Grab
Manganese (Mn) (g/l) ^{1,2}		100.0	Monthly	Grab
Mercury (Hg) ^b (g/l) ^{1,2,5}		0.025	Monthly	Grab
Nickel (Ni) (g/l) ^{1,2}		8.3	Monthly	Grab
Nitrogen (NO ₃ , NO ₂ , NH ₃) (mg/l) ^{1,2}		5.000	Monthly	Grab
pH (SU) ^{1,2}	shall always lie between 7.3-8.5		Monthly	Grab
Silver (Ag) (g/l) ^{1,2}		2.0	Monthly	Grab
Sulfide (undissociated H ₂ S) (g/l) ^{1,2}		2.0	Monthly	Grab
Surfactant (as Methylene Blue Activate Substances) (g/l) ^{1,2}		500	Monthly	Grab
Turbidity (NTU) ^{1,2}		10	Monthly	Grab
Zinc (Zn) (g/l) ^{1,2}		50.00	Monthly	Grab

1, 2, 3, 4, 5, 6, 7 and 8 see page 26.

^a See Special Condition No. 18 Item e.

^b See Special Condition No. 5.

TABLE A-3
MONITORING REQUIREMENTS
AT THE BACKGROUND SAMPLING POINT

During the period beginning on EDP + 4 months and lasting through EDP + 16 months the permittee shall perform monitoring at the mixing zone monitoring stations as specified below:
Receiving Water Classification : SC

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u> Measurement Frequency	Sample Type
Arsenic (As) (g/l) ^{1,2}	Monthly	Grab
Cadmium (Cd) (g/l) ^{1,2}	Monthly	Grab
Color (Pt-Co) ^{1,2}	Monthly	Grab
Dissolved Oxygen (mg/l) ^{1,2}	Monthly	Grab
Lead (Pb) (g/l) ^{1,2}	Monthly	Grab
Manganese (Mn) (g/l) ^{1,2}	Monthly	Grab
Mercury (Hg) (g/l) ^{1,2,5}	Monthly	Grab
Nickel (Ni) (g/l) ^{1,2,5}	Monthly	Grab
Nitrogen (NO ₃ , NO ₂ , NH ₃) (mg/l) ^{1,2,5}	Monthly	Grab
pH (SU) ^{1,2}	Monthly	Grab
Silver (Ag) (g/l) ^{1,2}	Monthly	Grab
Sulfide (Total) (g/l) ^{1,2}	Monthly	Grab
Surfactant (as Methylene Blue Activate Substances) (g/l) ^{1,2}	Monthly	Grab
Temperature (°C) ^{1,2}	Monthly	Grab
TKN (g/l) ^{1,2}	Monthly	Grab
Turbidity (NTU) ^{1,2}	Monthly	Grab
Zinc (Zn) (g/l) ^{1,2}	Monthly	Grab

1, 2, 3, 4, 5, 6, 7 and 8 see page 26.

TABLE A-4
INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on EDP and lasting through EDP + 36 months the permittee is authorized to discharge from outfall serial number 001 (treated wastewater). Such discharge shall be limited and monitoring by the permittee, as specified below:
Receiving Water Classification : SC

<u>Effluent Characteristics</u>	<u>Gross Discharge</u>		<u>Monitoring Requirements</u>	
	<u>Interim Effluent Limitations</u>		Measurement Frequency	Sample Type
	Monthly Average	Daily Maximum		
Copper (Cu) (g/l) ^{1,2, ß}		75.4	Monthly	Grab
Cyanide (CN) (g/l) ^{1,2,5, ß}		13	Monthly	Grab
Phenolic Substances (g/l) ^{1,2, ß}		95.4	Monthly	Grab

TABLE A-5
FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on EDP + 36 months + 1 day and lasting through EDP + 5 years the permittee is authorized to discharge from outfall serial number 001 (treated wastewater). Such discharge shall be limited and monitoring by the permittee, as specified below:

<u>Effluent Characteristics</u>	<u>Gross Discharge</u>		<u>Monitoring Requirements</u>	
	<u>Final Effluent Limitations</u>		Measurement Frequency	Sample Type
	Monthly Average	Daily Maximum		
Copper (Cu) (g/l) ^{1,2}		2.9	Monthly	Grab
Cyanide (CN) (g/l) ^{1,2,5 ****}		1	Monthly	Grab
Phenolic Substances (g/l) ^{1,2}		10.0	Monthly	Grab

**** See Special Condition No. 5.

1, 2, 3, 4, 5, 6, 7 and 8 see page 26.

ß See Special Condition No. 21.

SPECIAL CONDITIONS

These special conditions are an integral part of the EQB WQC and shall be incorporated into the NPDES permit in order to satisfy the provisions of Section 301 (b) (1) (C) of the Federal Clean Water Act (the Act) as amended (33 U.S.C. 1251 et. seq.):

1. The flow of discharge 001 shall not exceed the limitation of 60,566.40 m³/day (16.0 MGD) as daily maximum. No increase in flow shall be authorized without a recertification from the Puerto Rico Environmental Quality Board (EQB). 2, 4
2. The permittee will provide to the EQB an inventory of all industries connected to the treatment system with its corresponding waste characteristics, in a term not greater than eighteen (18) months after the effective date of the permit (EDP).

The permittee shall require any industrial user of the treatment system to comply with the requirements of Section 307 and 308 of the Act as amended (33 U.S.C.1251 et. seq.) by requiring each user to provide pretreatment to all its industrial wastewater prior to the discharge to such system as determined by EPA and EQB. The permittee shall require each industrial user to comply with Section 308 of the Act by requiring each user to perform the necessary monitoring to verify compliance with the level of pretreatment required. Each industrial user shall establish and maintain good records in relation to their pretreatment and shall allow entry to their facilities to EPA's and EQB's personnel at any time for any appropriate inspection. 7

3. The permittee shall provide written notice to the EQB and EPA of the following:
 - a. Any new introduction of pollutants, into the treatment system, coming from an industrial facility, that are not exclusively sanitary.
 - b. Any new introduction of pollutants, which exceeds 1,000 gallons/day, into such treatment system from a significant industrial user.
 - c. Any significant change in volume or character of pollutants being introduced into the treatment system by an existing source, that may cause a variation in the quality of the effluent to be discharged.

Such notice shall include information of the quality and quantity of the effluent to be introduced into such treatment system and the anticipated impact of such change in quantity and/or quality of the effluent to be discharged from the system. 2, 4, 6

4. No toxic substances shall be discharged, in toxic concentrations, other than those allowed as specified in the NPDES permit. Those toxic substances included in the Permit Renewal Application, but not regulated by the permit, shall not exceed the concentrations specified in the applicable regulatory limitations. 2, 3
5. The samples taken for the analysis of cyanide and mercury shall be analyzed using the analytic method approved by the EPA with the lowest possible detection level, conforming with Section 6.2.3 of the Puerto Rico Water Quality Standards Regulation (PRWQSR). 3

6. All sample collection, preservation, and analysis shall be carried out in accordance with the Code of Federal Regulation (CFR) Title 40, Part 136. All chemical analyses shall be certified by a chemist licensed to practice the profession in Puerto Rico. All bacteriological tests shall be certified by a microbiologist or a medical technician licensed to practice the profession in Puerto Rico. 1,3
7. The solid wastes (sludge, screenings and grit) generated due to the treatment system operation shall be:
 - a. disposed using an alternative previously approved by EQB and EPA, and in compliance with the applicable requirements established in the CFR Title 40 Part 257. A semiannual report shall be submitted to EQB and EPA notifying the method or methods used to dispose the solid wastes generated in the facility. Also, a copy of the approval or the permit applicable to the disposal method used shall be submitted.
 - b. transported adequately in such way that access is not gained to any body of water or soil. In the event of a spill of solid waste on land or into a body of water, the permittee shall notify the Point Sources Permits Division of EQB's Permit and Compliance Branch and EPA's Caribbean Environmental Protection Division in the following manners:
 - 1) By telephone communication within a term no longer than twenty four (24) hours after the spill (EQB at 751-1891 or 767-8731) (EPA at 729-6951).
 - 2) By letter, within a term no longer than five (5) days after the spill.
 - 3) This notification shall include the following information:
 - a) spill material
 - b) spill volume
 - c) measures taken to prevent the spill material from gaining access to any body of water.
8. A log book shall be kept for the material removed from the treatment system, such as sludge screenings and grit detailing the following items:
 - a. Removed material, date and source of it.
 - b. Approximate volume and weight.
 - c. Method by which it is removed and transported.
 - d. Final disposal and location.
 - e. Person that offers the service.

A copy of the Non-Hazardous Solid Waste Collection and Transportation Service Permit issued by the authorized official from the EQB should be attached to the log book. 3

9. The sludge produced within the facility due to the operation of the system shall be analyzed and all constituents shall be identified as required by "Standards for the Use or Disposal of Sewage Sludge" (CFR Title 40, Part 503) and by the EQB's Solid Wastes Program. The permittee shall obtain appropriate federal and state approvals prior to the final disposal of such wastes. The sludge shall be disposed properly in such manner that water pollution or other adverse effects to surface waters or to underground water do not occur. 2,5
10. If any standard or prohibition to the sanitary sludge disposal is promulgated and said prohibition or standard is more stringent than any condition, restriction, prohibition or standard contained in the NPDES permit, such permit shall be modified accordingly or revoked and re-issued to be adjusted with regard to such prohibition or standard. 9
11. No changes in the design or capacity of the treatment system will be permitted without the previous authorization of EQB. 4
12. Prior to the construction of any additional treatment systems or prior to the modification of the existing one, the permittee shall obtain the approval of the engineering report, plans and specifications from EQB. 4
13. The permittee shall install, maintain and operate all water pollution control equipment in such manner as to be in Compliance with Applicable Rules and Regulations. 2, 3
14. The flow measurement device for the discharge 001 shall be periodically calibrated and properly maintained. Calibration and maintenance records must be kept. 2, 4
15. The sampling point for discharge 001 shall be located immediately after the primary flow measuring device.
16. The sampling point for discharge 001 shall be labeled with a 18 inches x 12 inches (minimum dimension) sign that reads as follows:

"PUNTO DE MUESTREO PARA LA DESCARGA 001"

17. Following the issuance of licenses by the Potable Water and Wastewater Treatment Plants Operators Examining Board of the Government of Puerto Rico, all water and wastewater facilities, whether publicly or privately owned, must be operated by a person licensed by such Examining Board. 2
18. The EQB has defined and authorized an Interim Mixing Zone (IMZ) pursuant to Article 5 of the PRWQSR. 5

- a. The IMZ is delineated by the following points (See diagram I):

	Lambert Coordinates (Meters)	Geographic Coordinates
Point 1	E 72,579.63 N 64,099.85	Lat. 18°24'39.65" Lon. 67°11'19.66"
Point 2	E 72,597.70 N 64,139.74	Lat. 18°24'40.95" Lon. 67°11'19.05"
Point 3	E 72,704.64 N 64,095.95	Lat. 18°24'39.54" Lon. 67°11'15.40"
Point 4	E 72,765.51 N 64,194.39	Lat. 18°24'42.75" Lon. 67°11'13.34"
Point 5	E 72,801.80 N 64,170.57	Lat. 18°24'41.98" Lon. 67°11'12.10"
Point 6	E 72,722.59 N 64,036.24	Lat. 18°24'37.60" Lon. 67°11'14.78"

*** Please note the latitudes and longitudes of the mixing zone stations will be confirmed with EQB.**
The diffuser configuration is a one hundred (100) degree "Y" type, consisting of two (2) legs three hundred seventy four (374) feet long and eighteen to thirty (18-30) inches in diameter. A total of fifteen (15) ports along each leg diffuser shall be opened, the end port and one (1) port on every other raiser should open in alternative directions.

- b. The mixing zone sampling stations shall be located at points 1, 3, 5 and 6 described in Part "a" of this special condition.
- c. A background sampling station shall be located one hundred (100) meters up current from Point 2 or Point 4 of the mixing zone depending on the currents direction at the time of sampling. The Latitude/longitude of these two background stations shall be:
- d. The permittee shall maintain records of the equipment used to be situated at the mixing zone boundaries. Such records shall include the date when the equipment was obtained or leased, calibration date, serial number, model, etc.

To identify the location of the sampling points of the mixing zone and the background, the permittee shall use the procedure established in the EPA-QA/QC for 301(h) Document (Table D-1 Example ZID Boundary station locations).

If the permittee determines to use another method to identify the sampling points of the mixing zone, it shall, prior to the utilization of such method, obtain a written approval for their usage.

e. The IMZ is defined for the following parameters:

Parameters for which an Interim Mixing Zone has been <u>Granted</u>	Daily Maximum Discharge Limitation at Outfall Serial Number 001	Daily Maximum Limitation at the <u>Borders of the IMZ</u>
Arsenic (As) (g/l)	4.0	1.4
Cadmium (Cd) (g/l)	8.0	5.0
Color (Pt-Co Units)	48	
Dissolved Oxygen (mg/l)	---	>4.0
Lead (Pb) (g/l)	91.5	8.5
Manganese (Mn) (g/l)	134.0	100.0
Mercury (Hg) (g/l)	0.6	0.025
Nickel (Ni) (g/l)	49	8.3
Nitrogen (NO₂, NO₃, NH₃) (mg/l)	65.000	5.000
pH (SU)	6.0 – 9.0	7.3 - 8.5
Silver (Ag) (g/l)	85.0	2.0
Surfactant (MBAS) (g/l)	6,300	500
Turbidity (NTU)	84	10
Zinc (Zn) (g/l)	128.00	50.00

* The color at the edge of the mixing zone shall not exceed the color at the receiving water body (background sampling point).

- f. Monitoring samples for these parameters shall be taken at the sampling point 001, the background monitoring station and at the sampling points of the IMZ. The discharge shall comply with the water quality standards limitations for all the other substances on sampling point 001.
- g. The monitoring samples on the four (4) stations in the boundaries of the IMZ and the reference background monitoring station shall be taken at three (3) depths in each station: 10%, 50%, 90% of the depth.
- h. The permittee shall implement a monthly monitoring program, for a period of one (1) year starting no later than sixty (60) days after the EQB's written approval of the Quality Assurance Project Plan, to obtain the necessary data required to validate the mathematical model. The monitoring program shall be designed in such manner that the samples at discharge 001 will be taken at 30 minutes intervals, beginning three (3) hours before the first mixing zone point sample is taken. To correlate the samples taken at the effluent with the samples taken at the mixing zone the following procedure should be used (all pertinent corrections shall be done due to the fact that the diameter of the points and the diffuser are not constant):
 1. Using an electronic worksheet (Lotus 123, Excel, etc.) or a computer program, the permittee shall generate the following table for each instantaneous flow measurement:
 - a) Column 1: Time (T) – The flow measurement time will be recorded using the 24 hours system (e.g.,...12:00, 13:00, ...).

b) Column 2: Flow (Q_T) – The instantaneous flow measurement at time T will be recorded in gallons per minute.

c) Column 3: Time interval (t) in minutes.

2. The sum of the time intervals (t) will be determined and recorded in Column 4.

3. The instantaneous average flow (Q_{ave}) will be determined in the time interval using the following equation and recorded in Column 5.

$$Q_{ave} = (Q_T + Q_{T+30})/2$$

4. The average velocity (V_{ave}) will be determined in the time interval using the following equation and recorded in Column 6.

$$V_{ave} = Q_{ave} / [(\pi / 4) D^2]$$

where D = is the outfall diameter

5. The distance (d) traveled in the interval, calculated using the following equation, will be recorded in Column 7:

$$d = (V_{ave}) t$$

6. The total distance traveled (d) will be recorded in Column 8.

7. Compare the outfall total length (L) (land and submarine portions measured from the discharge 001 sampling point to the diffuser) with d.

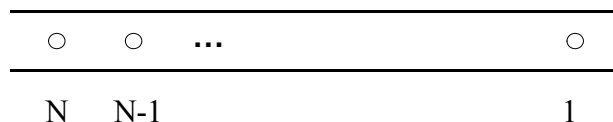
a) If d is less than L, then the steps 2 through 6 shall be repeated for the next interval.

b) If d is equal to L, then the time of travel of a flow element Q_T , to reach the diffuser (T_2) is equal to t.

c) If d is greater than L, then $T_2 = t - (d - L) / V_{ave}$.

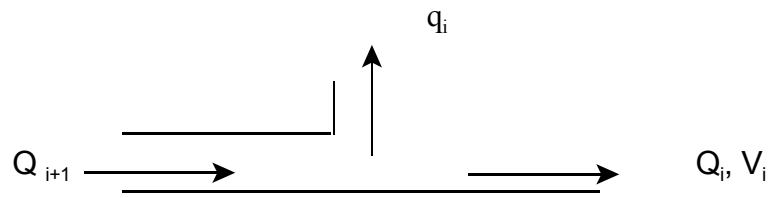
8. The time of travel in the diffuser (T_3) shall be determined using the following procedure:

a) Enumerate the open ports beginning with the port located at the end of the diffuser.



where N = total number of open ports in the diffuser

- b) Perform a mass balance at each open port.



$$q_i = a_i (Q_T / a_i)$$

$$Q_i = Q_{i+1} - q_i$$

where Q = flow in the diffuser
 q = port's discharge flow
 a = port's cross sectional area

- c) Determine the velocity in the diffuser (V) using the following equation:

$$V_i = Q_i / A_D$$

where A_D = diffuser cross sectional area

- d) Determine the elapsed time of a flow element to travel the distance between two open ports (t_i) using the following formula:

$$t_i = d / V_i$$

where d = distance between two open ports

- e) The time of travel of a flow element through the diffuser (T_3) will be equal to the sum of all t_i (t_i).

The time at which a particular flow element shall reach the receiving water body (T_{MZcalc}) shall be determined using the following equations:

For mixing zone points 1 and 5:

$$T_{MZcalc} = T + (T_2 + T_3)$$

For mixing zone points 3 and 6:

$$T_{MZcalc} = T + T_2$$

A table shall be prepared that include the values of T , T_2 , $(T_2 + T_3)$, T_{MZcalc} for points 1 and 5, and T_{MZcalc} for points 3 and 6; also, a column shall be provided to record the actual mixing zone sampling time (T_{MZ}), as follows:

T	T_2	$(T_2 + T_3)$	T_{MZcalc}		T_{MZ}	
			1 & 5	3 & 6	1 & 3	3 & 6

In the case that T_{MZ} will not be equal to any T_{MZcalc} , an approximation shall be made to the nearest T_{MZcalc} . If T_{MZ} coincide with the half of the time interval ($T_{MZcalc_i} - T_{MZcalc_{i-1}}$), then, T_{MZ} shall be approximate to $T_{MZcalc_{i-1}}$.

- i. The permittee shall conduct quarterly definitive acute and chronic toxicity tests using the organisms Mysidopsis bahia, Cyprinodon variegatus and Champia parvula for the wastewater discharge identified as 001.
- j. Thirty (30) days from the EDP, the permittee shall submit, for evaluation and approval of the EQB, a protocol to conduct such toxicity tests.

Such protocol shall include but not be limited to:

- 1) The laboratory responsible for the performance of the toxicity testing and a full description of the laboratory capabilities and personnel expertise.
 - 2) A detailed description of the methodology to be utilized in the performance of the tests, including equipment, sample collection and source of test organisms.
 - 3) A schematic diagram which depicts the effluent sampling location. The diagram shall indicate the location of effluent sampling in relation to wastewater treatment facility and discharge point 001.
- k. The tests shall be conducted quarterly beginning not later than one hundred eighty (180) days from the EDP, for a one (1) year period and from there they will be conducted annually.
 - l. The toxicity test shall be conducted according to the most recent editions of the following publications of the Federal Environmental Protection Agency (EPA):
 - 1) Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA/600/4-90/027F), August, 1993 (for the acute tests).
 - 2) Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms (EPA/600/4-91/003), 2nd Edition, 1994 (for the chronic tests).
 - m. The procedures, methods, techniques, conditions, etc., included in the above mentioned publications shall be followed at all times. If the permittee wants to use other procedures, methods, etc., because he understands that:
 - 1) by the nature or conditions of this case is impossible to follow such publications;

2) other procedures, methods, etc., are adequate,

then the permittee shall, prior to the utilization of other procedures, methods, etc., obtain the EPA and EQB, written approval for their usage.

- n. The effluent samples for the toxicity tests shall be used in or before 36 hours after being collected.
- o. The acute toxicity for Champia parvula shall be estimated using the same procedure and with the same data used to estimate the chronic value. The acute value will be determined by obtaining the geometric average concentration where more than one cystocarp is produced and the next highest concentration tested.
- p. A report on the toxicity tests conducted shall be submitted to the EQB, during the thirty (30) days period after the tests were conducted. This report shall be prepared according to the aforementioned publications of EPA.
- q. Based on the revision on the test results, the Regional Administrator of the EPA or EQB can require additional toxicity tests, including toxicity/treatability studies and can revoke the interim or final mixing zone authorization according with Section 5.14 of the PRWQSR.
- r. The solids on the discharge shall not cause deposition on the bottom of the receiving waterbody. The discharge shall not contain settleable solids.
- s. The discharge shall not cause the growth or propagation of organisms that negatively disturb the ecological equilibrium in the areas adjacent to the mixing zone.
- t. The mixing zone shall be free of debris, scum, floating oil and any other substances that produce objectionable odors.
- u. The permittee shall maintain in good operating conditions the discharge system (discharge outfall [land and submarine], diffuser, ports, etc.). At least once a year, the discharge system shall be inspected to determine if some repairs, replacing, etc., on the discharge system is required. A report of such inspections shall be submitted to EPA and EQB not later than sixty (60) days after the performance of the inspection.
- v. The EQB, can require that the permittee conduct bioaccumulation studies, dye studies, water quality studies or any other pertinent studies. If the EQB require one or more of the aforementioned studies, the permittee will be notified to conduct such study(ies). Sixty (60) days after the notification by the EQB, the permittee shall submit, for evaluation and approval of the EQB, a protocol to conduct such study(ies). Thirty (30) days after the EQB approval, the permittee shall conduct such study(ies). Sixty (60) days after conducting such study(ies), the permittee shall submit a report that includes the results of such study(ies).
- w. If the mathematical model is validated as established in Section 9 of Article 5 of WQSR and Part B of Chapter 7 of Section II of Mixing Zone and Bioassays

Guidelines, a final mixing zone authorization will be issued by EQB. Nevertheless, if the mathematical model is not validated, the EQB may revoke the IMZ authorization in accordance with Section 14 of Article 5 of WQSR. In such case, the permittee must submit a compliance plan according to Section 16 of Article 5 of PRWQSR.

- x. The EQB can allow that the permittee use alternative methods for the mixing zone validation if such methods comply with the applicable federal and Commonwealth regulation or when new technology is developed that produce results technically and environmentally more reliable than those produced by conventional methods described in this special condition.
- y. The EQB will determine if the effluent limitations will become final or if it will be necessary to reopen the WQC to modify (increase or decrease) the effluent limitation for one (1) or more of the aforementioned parameters after the revisions of the results obtained in the studies required in this special condition.
- z. The authorization for the mixing zone will not be transferable and does not convey any property rights of any sort or any exclusive privileges, nor does it authorizes any injury to persons or property or invasion of other private rights, of any infringement of Federal or State law or regulations.

- 19. The permittee shall submit, in a term not greater than ninety (90) days after EDP, a modified method to analyze mercury on the mixing zone and background monitoring points, with a detection level lower than the applicable water quality standard (0.025 g/l) for the evaluation and approval of EQB. No later than sixty (60) days after the EQB approval of such method, the permittee should start taking mercury samples as required on Tables A-2 and A-3 of the permit.
- 20. When a new industrial discharge effluent contains any pollutant not included in the permit mixing zone or its concentration after it is proportionally mixed with the Aguadilla Regional Treatment System effluent is greater than the approved concentration for compliance in the permit mixing zone, the connection could not be approved until the mixing zone is re-defined.

21. Interim Limits and Compliance Plan:

- a. The permittee shall comply with the following interim and final limits for discharge 001 for the followings parameters:

<u>Parameters</u>	<u>Interim Limits (g/l)</u>	<u>Final Limits (g/l)</u>
Copper (Cu)	75.4	2.9
Cyanide (CN)	13	1
Phenolic Substances	95.4	10.0

- b. The interim limits shall be effective during the period beginning on the EDP and lasting through EDP + 36 months. After EDP + 36 months + 1 day, the final limits shall become effective. During this time, the Aguadilla Regional Wastewater Treatment Plant, shall comply with the Compliance Plan submitted on September 28, 1999, which was evaluated and approved by EQB. The itinerary of the Compliance Plan is the following:

<u>Activity</u>	<u>Compliance Deadline</u>
1. The permittee shall submit a Plan of Study (POS) to EQB. This POS shall include standard operating procedures for field sample collection, the protocols to be used for evaluating alternative laboratory analytical and quality assurance and quality control techniques, laboratories to be used, and detailed schedules for sampling and analysis.	EDP + 60 days
2. EQB submit comments on the POS.	EDP + 90 days
3. The permittee shall submit a revised POS which adequately address comments	EDP + 120 days
4. EQB approves the POS.	EDP + 150 days
5. The permittee shall initiate the sampling required for each of the parameters. Based on the POS, laboratories and analytical techniques shall be selected. Protocols for achieving lower detection limits for background stations shall be finalized with the selected laboratories. The first sampling and analysis event(s) and evaluation of results for compliance shall be done in a stepwise fashion appropriate to the particular parameter.	EDP + 210 days
6. The permittee shall provide to EQB the results of the first sampling event as a Technical Memorandum, which shall provide recommendations. If the sampling shows compliance, the report shall recommend one of two actions: i. Termination of study if a mixing zone is not required for the parameters (compliance is demonstrated at the end of pipe; routine effluent monitoring will continue). ii. Termination of the study and appropriate permit revisions if a mixing zone is required for compliance.	EDP + 270 days
If the sampling shows that laboratory techniques or analytical artifacts are not the causes of the non-compliance, then a supplemental study plan shall be developed to determine the source of the substances(s), or the natural background levels of the substances, or both. The recommended plan of action shall be based on the results of the sampling and analysis.	

7. For those substances that show compliance at the end of the pipe, the permittee shall take no further action except to request any appropriate permit modification.

EDP + 360 days

For those substances that show compliance if a mixing zone is available, the permittee shall submit a mixing zone application for specific substances as appropriate.

For those substances for which background levels exceed the applicable water quality standard and the effluent levels are less than background, the permittee shall submit a supplemental study plan to perform a study to determine the natural background concentration.

For those substances that exceed the applicable water quality standard in the effluent and appear to be above natural background and cannot comply with the PRWQSR within a mixing zone, the permittee shall initiate a source identification and control plan.

8. For those substances that show compliance if a mixing zone is available, the permittee anticipates that the mixing zone shall have been approved by the EQB by this date and no further action shall be required.

EDP + 720 days

9. For those substances for which background levels exceed the applicable water quality standard and the effluent levels appear to be less than natural background, the permittee shall submit a formal request that site-specific water quality criteria apply. The request shall be based on the natural background determination study.

EDP + 810 days

For those substances that exceed the applicable water quality standard in the effluent and appear to be above natural background and cannot comply with PRWQSR within a mixing zone, the permittee anticipates that source identification and control measures shall have been instituted. Any permit modifications or mixing zones required for compliance shall be submitted.

10. For those substance for which background levels exceed the applicable water quality standard and the effluent levels appear to be less than natural background, the permittee anticipates that site-specific water quality criteria at natural background levels shall be approved and that no further action shall be required.

EDP + 3 years

For those substances that exceed the applicable water quality standard in the effluent and appear to be above natural background and cannot comply with PRWQSR within a mixing zone, the permittee anticipates that source identification and control measures shall have been successful, that any permit modifications or mixing zones required for compliance shall have been approved, and that no further action shall be required.

- c. Quarterly progress report shall be submitted after EDP to EQB and EPA. The first progress report shall be submitted thirty (30) days after the EDP. If a time extension is necessary to comply with the approved schedule a petition shall be submitted for EQB and EPA approval, in which it is demonstrated that certain conditions exist that make necessary an extension of such period. This petition shall be submitted thirty (30) days prior to begin the requested time extension.
- d. EQB or EPA may revoke the approval of the Compliance Plan stated in this Special Condition for any of the following reasons:
1. The permittee has not revealed all the relevant facts in the request or has provided false representation of any of the relevant facts during the evaluation of such request.
 2. Non-compliance with any applicable provisions of the Compliance Plan.
 3. Changes in conditions, without due authorization from EQB, under which the Compliance Plan was approved.
 4. There exists an imminent hazard to public health or the environmental.

EQB reserves the right to supervise and oversee the actions of the permittee concerning the performance of the Compliance Plan.

22. The permittee shall provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5 (c) (1). The schedule for providing written reports documenting the local limits technical evaluation shall not exceed:

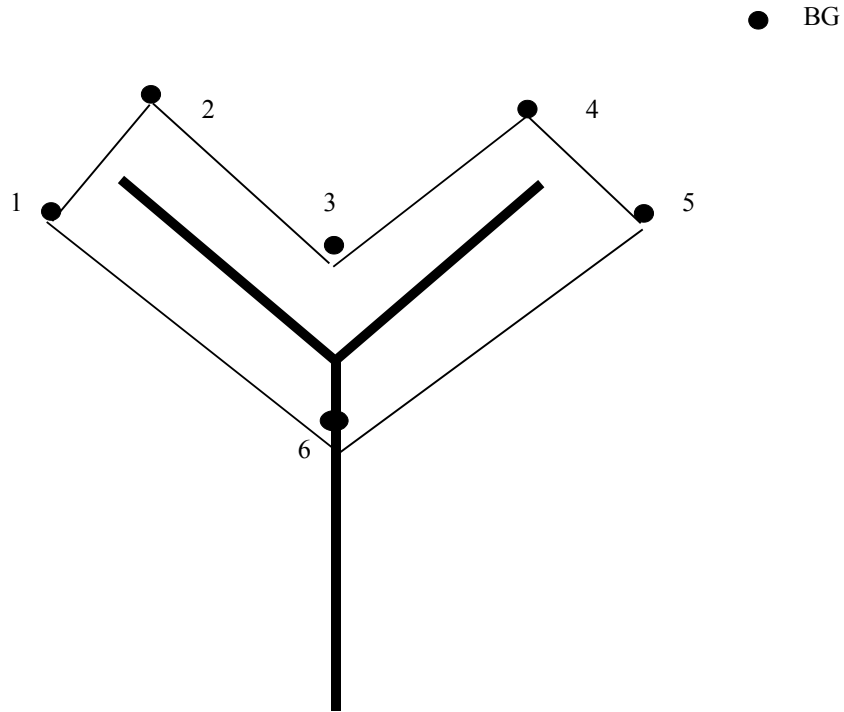
- EDP + 3 months: Analysis of the maximum allowable headworks (MAHL) to the plant based on the final permit limits for pollutants listed in Tables A-1 and A-5. The headworks analysis shall include an explanation of the removal capabilities of plant. If the removal efficiency vary from those provided in the March 25, 1998 Local Limits report, a full justification of the rates and revised calculations for additional pass through requirements (water quality standards & sludge requirements) shall also be provided.
- EDP + 6 months Local limits technical evaluation based on MAHL, domestic loading, and proposed allocation to non-domestic sources.
- EDP + 9 months Proposed revisions to local limits (if indicated by technical evaluation) and implementation plan not to exceed EDP + 12 months; for copper, cyanide, and phenolic substances, the implementation plan cannot exceed EDP + 36 months.
- EDP + 12 months Include revised local limits (if indicated by technical evaluation) in permits issued to non-domestic users of the sewerage system.

23. The condition of this Water Quality Certificate (WQC) are considered as separate. Therefore, if the applicability of any condition of this WQC is stayed due to any circumstance, the remaining conditions of this WQC will not be affected. 4

24. The EQB, by the issuance of the WQC, does not relieve the applicant from its responsibility to obtain additional permits or authorizations from the EQB as required by law. The issuance of the WQC shall not be construed as an authorization to conduct activities not specifically covered in the WQC which will cause water pollution as determined by the WQSR. 4

1, 2, 3, 4, 5, 6, 7 and 8 see page 26.

DIAGRAM 1
Aguadilla RWWTP Mixing Zone



Lambert Coordinates
(Meters)

Geographic Coordinates

Point 1	E 120,137 N 263,723	Lat. 18° 24.454' Lon. 67° 11.352'
Point 2	E 120,150 N 263,764	Lat. 18° 24.477' Lon. 67° 11.344'
Point 3	E 120,262 N 263,728	Lat. 18° 24.458' Lon. 67° 11.281'
Point 4	E 120,317 N 263,832	Lat. 18° 24.514' Lon. 67° 11.250'
Point 5	E 120,355 N 263,812	Lat. 18° 24.503' Lon. 67° 11.228'
Point 6	E 120,284 N 263,676	Lat. 18° 24.430' Lon. 67° 11.268'

5. According to Article 5, Puerto Rico Water Quality Standards Regulation as Amended.
6. According to Article 3, Puerto Rico Water Quality Standards Regulation as Amended.
7. According to Article 6, Puerto Rico Water Quality Standards Regulation as Amended.
8. According to the Public Policy Environmental Act of June 18, 1970, as Amended, Act No. 9, 12 LPRA 1121 - 1142 et. seq.
9. According to the Code of Federal Regulation Title 40 (40 CFR), Part 131.36, as amended (Federal Register/Volume 57, No. 246/Tuesday, December 22, 1992).
10. According to the Environmental Protection Agency Pretreatment Standards (40 CFR 403, June 26, 1978, effective August 25, 1978, as Amended).
11. According to the Section 405 (d)(4) of the Federal Clean Water Act as Amended (33 U.S.C. 1251 et. seq.).
12. According to Article 8, Puerto Rico Water Quality Standards Regulation as Amended.

B. PROHIBITED DISCHARGE STANDARDS

Pursuant to Section 307 of the Act and regulations promulgated thereafter at 40 CFR 403.5, the permittee shall under no circumstances allow the introduction of the following pollutants into the POTW (publicly-owned treatment works):

1. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21.
2. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such discharges;
3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in sewers, or other interference with the operation of the POTW;
4. Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge of such volume or strength as to cause interference in the POTW;
5. Heat in amounts which will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities that the temperature at the treatment works influent exceeds 40°C (104°F);
6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
8. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

C. PRETREATMENT PROGRAM

I. Pretreatment Program Requirements

The permittee shall implement an Industrial Pretreatment Program in accordance with Section 402(b)(8) of the Clean Water Act, the General Pretreatment Regulations (40 CFR Part 403), and the legal authorities, policies, procedures, and financial provisions described in the permittee's approved pretreatment program. The pretreatment program submission entitled "Puerto Rico Aqueduct and Sewer Authority Pretreatment Program," dated August 1985 was approved on September 26, 1985; the enforcement response plan was approved on May 30, 1995; and revised local limits were approved on May 8, 1998. The permittee's pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

- (a) The permittee shall develop and enforce specific limits to implement the prohibitions listed in 40 CFR 403.5 (a)(1) and (b). Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.
 - (b) The permittee shall control through permit, order or similar means, the contribution to the POTW by each industrial user to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of industrial users identified as significant under 40 CFR 403.3(t), this control shall be achieved through permits or equivalent individual control mechanisms issued to each such user. Such control mechanisms must be enforceable and contain at a minimum a statement of duration (not to exceed 5 years), effluent limitations, sampling protocols, compliance schedule if appropriate, reporting requirements, and appropriate standard conditions.
 - (c) The permittee shall maintain and update industrial user information at a frequency adequate to ensure proper identification of industrial users subject to pretreatment standards, appropriate characterization of the nature of their discharges, and correct designation of industrial users.
 - (d) The permittee shall evaluate at least once every two years, whether each significant industrial user needs a plan to control slug discharges. If a slug control plan is needed, it shall contain at least the minimum elements required in 40 CFR 403.8(f)(2)(v).
 - (e) The permittee shall enforce and obtain remedies for non-compliance by any industrial users with applicable pretreatment standards and requirements.
 - (f) In keeping with the requirements of 40 CFR 403.8(f)(2)(v), the permittee must inspect and sample the effluent from each significant industrial user at least once per year. This is in addition to any industrial self-monitoring activities.
2. Pursuant to 40 CFR 403.5(e), whenever, on the basis of information provided to the Director, Division of Enforcement and Compliance Assistance, U.S. Environmental Protection Agency, it has been determined that any source contributes pollutants in the permittee's treatment works in violation of subsection (d) of Section 307 of the Clean Water Act, notification shall be provided to the permittee. Failure by the permittee to commence an appropriate enforcement action within 30 days of this notification may result in appropriate enforcement action against the source and permittee.

3. Sampling

The permittee shall conduct all sampling specified in this permit and the approved pretreatment program.

4. Pretreatment Report

The permittee shall provide to the U.S. EPA Region 2 a semi-annual report that briefly describes the permittee's program activities over the previous twelve months. The Agency may modify, without formal notice, this reporting requirement to require less frequent reporting if it is determined that the data in the report does not substantially change from year to year. The permittee must also report on the pretreatment program activities of all participating agencies. This report shall be submitted to the address cited in Part I section B.2. of this permit no later than December 1 of each year for the period covering September 1 through August 31 of the preceding year and shall include:

- (a) An updated industrial survey, as appropriate.
- (b) Results of any wastewater sampling conducted in accordance with the approved Pretreatment Program and General Pretreatment Regulations. In addition, the permittee shall provide an analysis and discussion as to whether the existing local limitations specified in Section 5.02 and Appendix A of the Puerto Rico Aqueduct & Sewer Authority Rules and Regulations for the Supply of Water and Sewer Service continue to be appropriate to prevent treatment plant interference, pass through of pollutants that could affect water quality, and sludge contamination. Such an analysis would be based on an updated industrial user inventory and any headwork priority pollutant scan.
- (c) Status of Program implementation to include:
 - i. Any proposed substantial modifications to the pretreatment program as originally approved by EPA to include but not limited to; local limitations, special agreements, and staffing and funding updates.
 - ii. Any interference, upset or permit violations experienced at any of the POTW directly attributable to industrial users.
 - iii. Listing of significant industrial users issued Industrial Discharge Permits.
 - iv. Listing of significant industrial users inspected and/or monitored during the previous reporting period and summary of results.
 - v. Listing of significant industrial users planned for inspection and/or monitoring for the next reporting period along with inspection frequencies.
 - vi. Listing of significant industrial users notified of promulgated pretreatment standards, local standards or any applicable requirements under Section 405 of the Clean Water Act and Subtitle C and D of the Resource Conservation and Recovery Act, as required in 40 CFR Part 403.8(f)(2)(iii).

- vii. Listing of significant industrial users notified of promulgated pretreatment standards or applicable local standards who are on compliance schedules. The listing should include for each facility the final date of compliance.
- viii. Planned changes in the implementation program.

(c) Status of enforcement activities to include:

- i. Listing of categorical industrial users, who failed to submit baseline reports or any other reports as specified in 40 CFR 403.12(d) and in Section 5.05 of the Puerto Rico Aqueduct & Sewer Authority Rules and Regulations for the Supply of Water and Sewer Service.
 - ii. Listing of significant industrial users not complying with Federal or local pretreatment standards as of the final compliance date.
 - iii. Summary of enforcement activities taken or planned against non-complying industrial users. The permittee shall publish, at least annually in the largest daily newspaper within the permittee's service area, a list of significant industrial users which, during the previous twelve months were in significant non-compliance with the applicable pretreatment standards or requirements. Significant noncompliance shall be determined based upon the more stringent of either criteria established at 40 CFR Part 403.8(f)(vii) or criteria established in the permittee's approved pretreatment program.
5. The permittee shall notify EPA 60 days prior to any major proposed changes in its existing sludge disposal practices.
6. The permittee shall provide adequate staff, equipment, and support capabilities to carry out the elements of the pretreatment program.
7. The permittee shall provide notice to EPA of the following:
- (a) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Act if it were directly discharging those pollutants; and
 - (b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - (c) For purposes of this paragraph, adequate notice shall include information on:
 - i. the quality and quantity of effluent introduced into the POTW,
and

- ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

D. Sewage Sludge Requirements

1. Reopener:

If an applicable "acceptable management practice" or numerical limitation for pollutants in sewage sludge promulgated under Section 405(d)(2) of the Clean Water Act as amended by the Water Quality Act of 1987 is more stringent than the sludge pollutant limit or acceptable management practice in this permit, or controls a pollutant not limited in this permit, this permit shall be promptly modified or revoked and reissued to conform to the requirements promulgated under Section 405(d)(2). The permittee shall comply with limitations by no later than the compliance deadline specified in the applicable regulations as required by Section 405(d)(2)(D) of the Clean Water Act.

2. Cause for modification.

40 CFR §122.62 (a)(1) provides that the permit may be modified but not revoked and reissued except when the permittee requests or agrees where there are material and substantial changes or additions to the permitted facility or activity, including a change or changes in the permittee's sludge use or disposal practice, which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

3. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a Municipal Solid Waste Landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.

4. The permittee shall comply with 40 CFR Part 503. In accordance with 40 CFR Part 503.4, treatment works sending sewage sludge to a MSWLF shall meet the requirements of Part 258, that is, ensure that the sewage sludge is non-hazardous and non-liquid (ie., it passes the Paint Filter Liquids Test).

5. Sewage sludge shall be evaluated ("See below") for hazardous waste characteristics specified at 40 CFR Part 261 Subpart C. Sludge shall be tested after final treatment prior to leaving the POTW site. Sewage sludge determined to be a hazardous waste in accordance with 40 CFR Part 261, shall be handled according to RCRA standards for the disposal of hazardous waste in accordance with 40 CFR Part 262. The disposal of sewage sludge determined to be a hazardous waste, in other than a certified hazardous waste disposal facility shall be prohibited. If the sludge is determined to be a hazardous waste, EPA's Caribbean Environmental Protection Division (telephone no. (787) 729-6951) and EQB shall be notified within twenty four (24) hours. In addition, a written report shall be provided to EPA within seven (7) days of such determination. The report shall contain test results, certification that unauthorized disposal has not occurred and a summary of alternative disposal plans that comply with RCRA standards for the disposal of hazardous waste. The report shall be addressed to: Branch Chief, RCRA Compliance Branch, EPA Region 2, 290 Broadway, New York, New York 10007-1866. A copy of this report shall be

sent to the Chief, Enforcement and Superfund Branch, Caribbean Environmental Protection Division, EPA Region 2, 1492 Ponce De Leon Avenue, Suite 417, Santurce, Puerto Rico 00907-4127. After the sewage sludge has been monitored for two years and if it has not been determined to be a hazardous waste, the monitoring frequency shall be once per year.

6. Sewage sludge shall be tested (* See below) in accordance with the method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846). After the sewage sludge has been monitored for two years and has passed the paint filter tests, the monitoring frequency shall be once per year.

7. The permittee shall comply with 40 CFR Part 503, which requires preparers of sewage sludge to submit annual reports no later than February 19 of every year. The annual report shall include the following information:

- a. Amount of sludge generated, in dry metric tons.
- b. Use or disposal practices.
- c. Amount of sludge that goes to each use or disposal practice.
- d. The name and address of the Municipal Solid Waste Landfill.
- e. Results of the hazardous waste determination (per 40 CFR Part 261) conducted on the sludge to be disposed.
- f. Results of the Paint Filter Liquids Test conducted on the sludge to be disposed.

The report shall be submitted to the Chief, Enforcement and Superfund Branch, Caribbean Environmental Protection Division, EPA Region 2, 1492 Ponce De Leon Avenue, Suite 417, Santurce, Puerto Rico 00907-4127, and to the Chief, Water Compliance Branch, EPA Region 2, 290 Broadway, 20th floor, New York, NY 10007-1866..

*** Monitoring Requirements**

<u>Amount of Sludge</u> <u>(Metric Tons per 365-day Period)</u>	<u>Monitoring Frequency</u>
Less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Twice per year
Equal to or greater than 1,500	Once per quarter

ATTACHMENT #1
Monitoring, Reporting Requirements and General Conditions

A. DEFINITIONS

1. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
2. "Average weekly discharge limitations" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.
3. "Bypass" means the intentional diversion of wastes from any portion of a treatment facility.
4. "Composite" means a combination of individual (or continuously taken) samples of at least 100 milliliters, collected at periodic intervals over the entire discharge day. The composite must be flow proportional; either the time interval between each sample must be proportional to the discharge flow (i.e. samples of equal volume taken every "X" gallons of flow) or the volume of each sample must be proportional to the discharge flow (i.e. a proportional volume sample taken at constant time intervals). Samples may be collected manually or automatically. For a continuous discharge, a minimum of 24 individual samples shall be collected and combined to constitute a 24-hour composite sample. For intermittent discharges of less than four (4) hours duration, samples shall be taken at a minimum of 15 minute intervals. For intermittent discharges of more than four (4) hours duration, samples shall be taken at a minimum of 30 minute intervals.
5. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharge over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of pollutant over the day. For purposes of sampling, "daily" means an operating day or 24-hour period.
6. "Director" means the "Regional Administrator" or the "State Director", as the context requires, or an authorized representative. Until the State has an approved State program authorized by EPA under 40 CFR Part 123, "Director" means the Regional Administrator. When there is an approved State program, "Director" normally means the State Director. Even in such circumstances, EPA may retain authority to take certain action (see, for example, 40 CFR 123.1(d), 45 Federal Register 14178, April 1, 1983, on the retention of jurisdiction over permits EPA issued before program approval). If any condition of this permit requires the reporting of information or other actions to both the Regional Administrator and the State Director, regardless of who has permit-issuing authority, the terms "Regional Administrator" and "State Director" will be used in place of "Director".

7. "Discharge Monitoring Report" or "DMR" means the EPA uniform national form, including any subsequent additions, revisions, or modifications, for the reporting of self-monitoring results by permittees.
8. "Grab" means an individual sample collected in less than 15 minutes.
9. "Gross" means the weight or the concentration contained in the discharge. (Unless a limitation is specified as a net limitation, the limitation contained in this permit is a gross limitation).
10. "Maximum daily discharge limitation" means the highest allowable "daily discharge".
11. "Monthly" means one day each month (the same day each month) and a normal operating day (e.g., the 2nd Tuesday of each month).
12. "Net" means the amount of a pollutant contained in the discharge measured in appropriate units as specified herein, less the amount of a pollutant contained in the surface water body intake source, measured in the same units, over the same period of time, provided:
- a. The intake water source must be drawn for the same body of water into which the discharge is made; and
 - b. In cases where the surface water body intake source is pretreated for the removal of pollutants, the intake level of a pollutant to be used in calculating the net is that level contained after the pretreatment steps.
13. "Regional Administrator" means the Regional Administrator of Region II of EPA or the authorized representative of the Regional Administrator.
14. "Severe property damage" means that substantial physical damage to the treatment facilities which would cause them to become inoperable or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
15. "State Director" means the chief administrative officer of the State water pollution control agency, or the authorized representative of the State Director.
16. "Toxic pollutant" means any of the pollutants listed in 40 CFR 401.15 (45 CFR 44503, July 30, 1979) and any modification to that list in accordance with Section 307 (a)(1) of the Clean Water Act.
17. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
18. "Weekly" means every seventh day (the same day of each week) and a normal operating day.

B. MONITORING AND REPORTING REQUIREMENTS

1. Monitoring and Records. See Section C.10.

2. Discharge Monitoring Reports.

a. See Section C.12.d.

b. Monitoring results shall be obtained and recorded monthly on Discharge Monitoring Report Form (EPA-No. 3320-1). The monthly Discharge Monitoring Report Form shall be postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the Chief of the Compliance Assistance and Program Support Branch and State Director at the following addresses:

U.S. Environmental Protection Agency
Region II
290 Broadway, 21st Floor
New York, New York 10007-1866
ATTN: Chief, Compliance Assistance and
Program Support Branch

Environmental Quality Board of Puerto Rico
P.O. Box 11488
Santurce, Puerto Rico 00910
ATTN: Water Quality Bureau

3. Quality Assurance Practices. The permittee is required to show the validity of all data by requiring its laboratory to adhere to the following minimum quality assurance practices:

a. Duplicate (1) and spiked (2) samples must be run for each constituent analyzed for permit compliance on 5% of the samples, or at least on one sample per month, whichever is greater. If the analysis frequency is less than one sample per month, duplicate and spiked samples must be run for each analysis.

b. For spiked samples, a known amount of each constituent is to be added to the discharge sample. The amount of constituent added should be approximately the same amount present in the unspiked sample, or must be approximately that stated as maximum or average in the discharge permit.

c. The data obtained in a. shall be summarized in an annual report submitted at the end of the fourth quarter of reporting in terms of precision, percent recovery, and the number of duplicate and spiked samples run.

(1) Duplicate samples are not required for the following parameters: Color, Temperature, Turbidity.

(2) Spiked samples are not required for the following parameters listed in Table 1 of 40 CFR 136:Acidity, Alkalinity, Bacteriological, Benzidine, Chlorine, Color, Dissolved Oxygen, Hardness, pH, Oil and Grease, Radiological, Residues, Temperature, Turbidity. Procedures for spiking samples and spiked sample requirements for parameters not listed on the above-referenced table are available through EPA's Regional Quality Assurance Coordinator.

- d. Precision for each parameter shall be calculated by the formula, standard deviation $s = (d^2/2k)^{1/2}$, where d is the difference between duplicate results, and k is the number of duplicate pairs used in the calculation.
- e. Percent recovery for each parameter shall be calculated by the formula $R = 100(F-I)/A$, where F is the analytical result of the spiked sample, I is the result before spiking of the sample, and A is the amount of constituent added to the sample.
- f. The percent recovery, R, for each parameter in e. above shall be summarized yearly in terms of mean percent recovery and standard deviation from the mean. The formula, $s = ((X-x)^2/(n-1))^{1/2}$, where s is the standard deviation around the mean X, x is an individual recovery value, and n is the number of data points, shall be applied.
- g. The permittee or his contract laboratory is required to annually analyze an external quality control reference sample for each pollutant. These are available through the Regional Quality Assurance Coordinator, Region II, U.S. Environmental Protection Agency, Edison Environmental Laboratory, Edison, New Jersey 08817.
- h. The permittee and/or his contract laboratory is required to maintain records of the specific analytical methods used, including options employed, if any, within a particular method, and of reagent standardization and equipment calibration operations.
- i. If a contract laboratory is utilized, the permittee shall submit the name and address of the laboratory and the parameters analyzed at the time it submits its discharge monitoring reports (see Section 2.b. above). Any change in the contract laboratory being used or the parameters analyzed shall be reported prior to or together with the monitoring report covering the period during which the change was made.

C. GENERAL CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

- a. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

b. Any person who violates sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act and 40 CFR Part 19 or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Clean Water Act is subject to a civil penalty not to exceed \$27,500 per day for each violation. The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Clean Water Act is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six years, or both. Any person who knowingly violates sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than fifteen years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than thirty years, or both. An organization as, defined in section 309(c)(3)(B)(iii) of the Clean Water Act shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

c. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

2. Duty to Reapply.

This permit and the authorization to discharge shall terminate on the expiration date indicated on the first page. In order to receive authorization to discharge after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permit issuing authority remains EPA, the permittee shall complete, sign, and submit an application to the Regional Administrator no later than 180 days before the expiration date.

3. Need to Halt or Reduce not a Defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems for collection and treatment (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. Permit Actions.

This permit may be modified, revoked and reissued, or terminated during its term for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

7. Property Rights.

This permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information.

The permittee shall furnish to the Director within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

9. Inspection and Entry.

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

10. Monitoring and Records.

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. Except for record of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of old data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
- c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurement;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- d. Monitoring results must be conducted according to test procedure approved under 40 CFR Part 136 or, in the case of sludge use or disposal approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.

e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.

11. Signatory Requirements.

- a. All applications, reports, or information submitted to the Director shall be signed and certified.
- b. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both.

12. Reporting Requirements.

- a. Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - (i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in §122.29(b); or
 - (ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under §122.42(a)(1).
 - (iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
- b. Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- c. Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

f. Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within twenty four hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within twenty-four hours under this paragraph.

(a) Any unanticipated bypass (see 13 below) which exceeds any effluent limitation in the permit;

(b) Any upset (see 14 below) which exceeds any effluent limitation in the permit;

(c) The violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within twenty four hours.

(iii) The Director may waive the written report on a case-by-case basis for report under paragraph (12)(f)(ii) of this section if the oral report has been received within twenty four hours.

g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (12)(a), (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12)(a) and (f) of this section.

h. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator and State Director, it shall promptly submit such facts or information to the Regional Administrator and State Director.

13. Bypassing

a. Bypass not violating limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be violated, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of subsections b. and c.

b. Notice.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in section 12 above.

c. Prohibition of bypass.

(1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or maintenance; and

(c) The permittee submitted notices as required under subsection b.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (13)(c)(1).

14. Upset.

a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of subsection b. are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated; and
- (3) The permittee submitted notice of the upset as required in subsection f. of section 12 above; and
- (4) The permittee complied with any remedial measures required under section 4 above (duty to mitigate).

c. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

15. Removed Substances.

Solids, sludge, filter backwash or other pollutants removed in the course of treatment or control of wastewater and/or the treatment of intake waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters. The following data shall be reported together with the monitoring data required in Section B.2.:

- (a) The sources of the materials to be disposed of;
- (b) The approximate volumes and weights;
- (c) The method by which they were removed and transported; and
- (d) Their final disposal locations.

16. Oil and Hazardous Substance Liability.

The imposition of responsibilities upon, or the institution of any legal action against the permittee under Section 311 of the Act shall be in conformance with regulations promulgated pursuant to Section 311 to discharges from facilities with NPDES permits.

17. Reopener Clause for Toxic Effluent Limitations.

Notwithstanding any other condition of this permit, if any applicable toxic effluent standard or prohibition is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the permit, this permit shall be promptly modified or revoked and reissued to conform to that effluent standard or prohibition.

18. Commonwealth Laws.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable Commonwealth law or regulation under authority preserved by Section 510 of the Act. The issuance of this permit does not preempt any duty to obtain Commonwealth or local assent required by law for the discharge.

19. Availability of Information.

a. NPDES permits, effluent data, and information required by NPDES application forms provided by the Director under 40 CFR 122.4 and 122.53 (including information submitted on the forms themselves and any attachments used to supply information required by the forms) shall be available for public inspection at the offices of the Regional Administrator and State Director.

b. In addition to the information set forth in subsection a., any other information submitted to EPA in accordance with the conditions of this permit shall be made available to the public without further notice unless a claim of business confidentiality is asserted at the time of submission in accordance with the procedures in 40 CFR Part 2 (Public Information).

c. If a claim of confidentiality is made for information other than that enumerated in subsection a., that information shall be treated in accordance with the procedures in 40 CFR Part 2. Only information determined to be confidential under those procedures shall not be made available by EPA for public inspection.

20. Severability.

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

D. EFFECTIVENESS OF PERMIT

1. This permit shall become effective in its entirety on the date indicated on the first page of this permit unless a petition has been filed with the Environmental Appeals Board to review any condition of the permit decision pursuant to the provisions of 40 CFR 124.19. All contested conditions and any uncontested condition(s) that are inseverable from the contested conditions shall be stayed. All other conditions shall become effective thirty (30) days after the date of the notification specified in 40 CFR 124.16(a)(2)(ii).
2. For purposes of judicial review under Section 509(b) of the Clean Water Act, final agency action on a permit does not occur unless and until a party has exhausted its administrative remedies under 40 CFR Part 124. Any party which neglects or fails to seek review under 40 CFR 124.19, thereby waives its opportunity to exhaust available agency administrative remedies.

ATTACHMENT #2

Preventive Maintenance Program

Within one hundred and twenty (120) days from the EDP, the permittee shall implement a Preventive Maintenance Program (PMP) for the Aguadilla Regional WWTP and its collection system (sewer lines and pump stations). Within ninety (90) days from the EDP, the permittee shall submit to EPA for approval, a report detailing the PMP that will be implemented for the Facility. Once approved by EPA, the PMP will become part of this permit.

The PMP shall include but not be limited to:

A. Wastewater Treatment Plant

1. Plant Tanks and Channels

Plant tanks and channels such as clarifies, tanks drain, grit channels and wet wells structures, shall be drained and inspected at least once a year. All metal and concrete surfaces that come in contact with wastewater and covered surfaces exposed to fumes shall have the recommended protective coating. The coating shall be re-applied where necessary at each inspection. On surfaces where the protective coatings are dead and flake-off, sand blasting will be required to the entire surface before new coatings are re-applied.

The permittee shall periodically inspect all mechanical and electrical equipment on the clarifiers' traveling bridges and replace parts as necessary.

When primary clarifiers are drained for periodic maintenance (at least quarterly), thorough inspection of the collectors should include the following tasks: inspect all mechanical equipment for wear and corrosion, examine all bolted connections for loose or missing bolts or shims; inspect scrapper blades and determine if replacement is necessary. The permittee shall lubricate all metal parts including the drive rails. The clarifiers' drive mechanism shall be inspected for excessive slack. The permittee shall check all suction lines and sumps for debris collection and clogging and clean all lines before filling the tanks. The permittee shall check all mechanical parts of the skimming unit for wear or corrosion.

2. Chlorinators and Chlorine Tanks

Chlorine gas leaks around chlorinators or containers of chlorine will cause corrosion of equipment. Every day the permittee shall check the manifold, the pressure regulator valve, chlorine lines, auxiliary valves, cylinder valves, the chlorine supply valve, the vacuum line and the injector for leaks. The exterior parts of the chlorinators shall be cleaned periodically. Chlorine tanks shall also be periodically inspected for possible corrosion or damage. Chlorine weight scales must be in good operating conditions at all times. Calibration procedures shall be conducted accordingly. A chlorine tank inventory shall be maintained at the plant and the tanks shall be properly secured. The chlorine leak detector (alarm) shall be tested periodically to verify its operation.

4. Ventilators

The permittee shall annually disassemble the units and check the frame, cover and damper for rust or corrosion, clean with solvent and paint if needed. The permittee shall check that the vibration damper and springs are operating freely. The motor shall be lubricated according to

manufacturer's recommendations. The permittee shall check for worn or frayed electrical wires and replace wires as necessary. Removal of the ventilator for service requires the substitution of an equivalent ventilation blower to maintain adequate ventilation.

5. Pumps

Pumps, motors and drives shall be oiled and greased in strict accordance with the recommendations of the manufacturers. Mechanical seals and/or packing and pumps impellers and bearings must be periodically inspected and repaired or replaced as necessary on each pumping unit of the facility. If two or more pumps of the same capabilities and purposes are in place and only one unit is necessary for duty work, the permittee shall alternate their use to equalize wear.

6. Electrical Control Panels

All electrical control panels shall be inspected at least twice per year to correct any inadequacies.

7. Valves

All valves shall be inspected and maintained in strict accordance with the recommendations of the manufacturer.

8. Sluice Gates

Sluice gates shall be tested periodically for proper operation. The sluice gates shall be cleaned periodically and painted, if necessary, with proper corrosion resistant paint.

9. Scum Lines

The permittee shall clean all scum lines periodically using rods equipped with cutters, high-pressure hydraulic pipe cleaning units, steam cleaning units, chemicals if necessary.

10. Sludge Lines

The permittee shall flush lines periodically with plant effluent or wastewater to avoid clogging.

11. Flow, pH, Dissolved Oxygen and Residual Chlorine meters

The permittee shall verify the calibration of all these units periodically in order to maintain the accuracy and dependability of each unit. Standard Method procedures shall be used to verify the electronic equipment accuracy or margin of error. Daily calibration logs shall be kept to ensure that the meters are working accordingly during each shift of operation.

12. Belt Filter Presses

Mechanical speed adjusters on press belt drives should be run through their full range of speed once a day in order to prevent grooving of the sheaves or conical drive disc. Belt press bearing blocks should be lubricated in accordance with belt press manufacturer's recommendations. Scheduled changing of gear box oils should follow manufacturer suggestions using the proper grade of oil. Periodic leak inspections of pneumatic and/or hydraulic systems for belt tensioning and overtravel adjustment are necessary. Belt wear at the edges indicates failure of the belt overtravel adjuster which should then be immediately fixed. Spray wash headers should be checked daily to ensure that all nozzles are discharging properly.

13. Polymer Tanks

The permittee shall inspect polymer tanks periodically for possible leaks.

14. Alternate Power Unit (APU)

The permittee shall inspect the battery charge status at least once a month. The APU shall be tested at least once a week to verify its operation. The permittee shall tune-up the APU at least semi-annually. The APU transfer switch shall be periodically inspected.

15. Mechanical Bar Screens

The permittee shall provide proper lubrication of all moving parts as recommended by the manufacturer. Rake guides shall be lubricated frequently to ensure smooth and quiet operation. The permittee shall periodically observe all moving mechanisms to determine if the components are free of obstructions, properly aligned, moving at constant speeds and producing no unusual vibrations. The chain of the bar screens tend to stretch from wear. Periodically, removal of a link may be necessary to ensure that the chain rides smoothly on the sprockets. To minimize equipment breakdown and maintain operational efficiency, parts observed to be badly worn require replacement. Chain drives require frequent replacement of chains, sprockets and other parts.

16. Grit Removal Mechanism

The following items should be checked regularly: gates; bolts on flights and elevator buckets, chains and sprockets; flights shoes and rails; collector screws; and shear pins. The underwater equipment and chain idler must be lubricated consistent with the manufacturer's lubricant and lubrication frequency recommendations.

17. Gravity Thickener

The permittee shall check weekly all oil levels and condensation drains, remove any accumulated moisture and ensure that the oil fill cap vent is open. The drive chains or belt should be adjusted monthly. Every year the drive should be disassembled and all gears, oil seals, and bearings examined. Gears and bearing surfaces should be inspected and those that are scored or cracked should be replaced. Replace any part that has an expected life of less than one year. Use corrosion resistant materials when possible to resist the thickener's hostile environments. During plant rounds regularly observe and record the drive torque indicator. Follow the manufacturer's recommended lubrication schedule and use the recommended lubricant types. Typically, the oil should be changed after the first 250 hours of operation and every six (6) months thereafter. The unit mechanical arm shall be periodically inspected for alignment.

18. Mechanical Blowers and Compressors

These units shall be lubricated and the oil changed as strictly recommended by the manufacturer. All valves shall be removed and inspected at least once a year. Shaft packing shall be inspected at frequent intervals and adjustments or replacement should be made as often as required to prevent excessive leakage. The compressor casing shall be periodically examined for corrosion, erosion, fouling, conditions of the stationary shaft and the condition of any other stationary parts that may be subject to maintenance. Any unsatisfactory parts should be replaced or repaired. The compressor rotor should be examined for evidence of corrosion, erosion, or fouling. If any deterioration is evident, an accurate record should be kept of the

rotor condition. The air filter, steam strainer and other equipment external to the unit, as well as all piping to and from the unit, should be checked for cleanliness.

19. Parshall Flumes

The hydrometer shall be kept clean and clear for easy reading.

20. Corrosion Control Program

The permittee shall implement a corrosion control program at the Aguadilla Regional WWTP. The program shall include periodic inspections of the plant's structures and equipments and an aggressive painting program. Under this program, the permittee shall develop an inspection schedule of all structures. This schedule shall be readily available at the facility.

21. Preventive and Corrective Maintenance Records

The permittee shall implement an equipment service card system or computer program identifying each piece of equipment in the plant. Each card or file should have the equipment name on it, a description of the equipment with the manufacturer's name and/or supplier, the manufacturer's recommended maintenance service and make sure that all necessary inspections and services are shown. The equipment service card shall also have the date that the preventive and corrective work was done and the time required to complete the work. The name of the person or company who performed the work shall be included. The preventive and corrective maintenance record will be used to establish maintenance history of the equipments, diagnose problems and prevent equipment failure that may lead to permit violations.

In accordance with the requirements of the "Memorandum of Agreement" (MOA) between the United States Environmental Protection Agency (EPA) and the Puerto Rico aqueduct and Sewer Authority (PRASA), the permittee must implement the second phase of the upgrading of PRASA's automation management information systems for maintenance control, treatment process control, scientific analysis data and operational job management. The schedule contained in the MOA are by no means altered, modified or changed by this requirement.

22. Spare Parts Inventory

A central inventory of spare parts, equipment and supplies must be maintained and controlled by the facility's maintenance supervisor. The basis for the inventory shall be the manufacturer's recommendations, supplemented by specific, historical experience with maintenance problems, and requirements in accordance with the history in the preventive and corrective maintenance records. Inventoried supplies must be kept at levels sufficient to avoid process interruptions.

B. Pump Stations

1. Pumps

Pumps, motors and drives shall be oiled and greased in strict accordance with the recommendations of the manufacturers. Mechanical seals and/or packing and pumps impellers and bearings must be periodically inspected and repaired or replaced as necessary on each pumping unit of the facility. If two or more pumps of the same capabilities and purposes are in place and only one unit is necessary for duty work, the permittee shall alternate their use to equalize wear.

2. Electrical Control Panels

All electrical control panels shall be inspected at least twice per year to correct any inadequacies.

3. Valves

All valves shall be inspected and maintained in strict accordance with the recommendations of the manufacturer.

4. Alternate Power Unit (APU)

The permittee shall inspect the battery charge status at least once a month. The APU shall be tested at least once a week to verify its operation. The permittee shall tune-up the APU at least semi-annually. The APU transfer switch shall be periodically inspected.

5. Bar Screens and Wet Wells

The permittee shall periodically clean the station bar screens and wet wells. Grease, rags, debris, etc. shall be removed periodically from the bar screens and wet wells in order to avoid equipment malfunction and/or raw sewage overflows from the stations.

6. Comminutors

The permittee shall periodically clean the comminutor(s) to avoid system stoppage. Lubrication of the equipment shall be provided as strictly recommended by the manufacturer.

7. Ventilators

The permittee shall annually disassemble the units and check the frame, cover and damper for rust or corrosion, clean with solvent and paint if needed. The permittee shall check that the vibration damper and springs are operating freely. The motor shall be lubricated according to manufacturer's recommendations. The permittee shall check for worn or frayed electrical wires and replace wires as necessary. Removal of the ventilator for service requires the substitution of an equivalent ventilation blower to maintain adequate ventilation.

8. Diesel Tank

The permittee shall periodically inspect the diesel tank for possible leaks. If the diesel tank does not have a ditch, the permittee shall construct a ditch for the tank.

9. Pneumatic Ejectors

The permittee shall periodically ensure that the pots are in good operating conditions. The permittee shall inspect valves, filters and/or electrical controls for proper operation. If a failure occurs and wastewater enters the air lines or air control valves, the permittee shall dismantle and clean the units. The permittee shall clean the air strainer between the ejector receiver and main air valve semi-annually and shall annually conduct a general inspection of all equipment, cleaning and painting all items as necessary. The permittee shall inspect the suction filter of the compressor regularly. The filter shall be inspected at least monthly and cleaned or replaced every three to six months.

10. Corrosion Control Program

The permittee shall implement a corrosion control program at the Aguadilla Regional WWTP pump stations. The program shall include periodic inspections of the plant's structures and an aggressive painting program. Under this program, the permittee shall develop an inspection schedule of all structures. This schedule shall be readily available at the stations.

11. Preventive and Corrective Maintenance Records

The permittee shall implement an equipment service card system or computer program identifying each piece of equipment in the plant. Each card or file should have the equipment name on it, a description of the equipment with the manufacturer's name and/or supplier, the manufacturer's recommended maintenance service and make sure that all necessary inspections and services are shown. The equipment service card shall also have the date that the preventive and corrective work was done and the time required to complete the work. The name of the person or company who performed the work shall be included. The preventive and corrective maintenance record will be used to establish maintenance history of the equipments, diagnose problems and prevent equipment failure that may lead to permit violations.

In accordance, with the requirements of the "Memorandum of Agreement" (MOA) between the United States Environmental Protection Agency (EPA) and the Puerto Rico aqueduct and Sewer Authority (PRASA), the permittee must implement the second phase of the upgrading of PRASA's automation management information systems for maintenance control, treatment process control, scientific analysis data and operational job management. The schedule contained in the MOA are by no means altered, modified or changed by this requirement.

C. Sewer Lines

The permittee shall implement a sanitary sewer line maintenance program. The sanitary sewer line maintenance program shall include a descriptive map of the Aguadilla Regional WWTP sanitary sewer system, frequency of periodic maintenance with the street maps, numbers of staff persons to be assigned, and the equipment that will be used and a description of the maintenance procedure. A copy of the sewer line maintenance program shall be kept at the facility.

Attachment #3

Waiver Monitoring Program

SECTION 301(h)

WAIVER MONITORING PROGRAM

FOR THE

AGUADILLA REGIONAL WASTEWATER TREATMENT PLANT

Attachment #4

Non-Industrial Source Control Program

- 1) Within one hundred and eighty days from the EDP the applicant shall submit to EPA a modified public education program designed to minimize the entrance of nonindustrial toxic pollutants and pesticides into its POTW(s) which shall be implemented no later than 18 months from the EDP.
- 2) The applicant shall also develop and implement additional nonindustrial source control programs on the earliest possible schedule.
- 3) The applicant's nonindustrial source control programs under paragraph (d)(2) of this section shall include the following schedules which are to be implemented no later than 12 months after issuance of a section 301(h) modified permit:
 - i. A modified schedule of activities for identifying nonindustrial sources of toxic pollutants and pesticides; and
 - ii. A modified schedule for the development and implementation of control programs, to the extent practicable, for nonindustrial sources of toxic pollutants and pesticides.
- 4) Each proposed modification to the nonindustrial source control program and/or schedule submitted by the applicant under this section shall be subject to revision as determined by the Administrator prior to issuing or renewing any section 301(h) modified permit and during the term of any such permit.